

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-027797**Date Inspected:** 20-Jun-2012**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** William Sherwood**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** SAS Tower**Summary of Items Observed:**

Caltrans Office of Structural Material (OSM) Quality Assurance Inspector (QAI) Joselito Lizardo was present at the Self Anchored Suspension (SAS) job site as requested to perform observations on the welding of components for the San Francisco Oakland Bay Bridge (SFOBB) Project.

At OBG 3W-PP122.2 @ 8650 location Y=2500mm to 5000mm top deck drop-in plate butt joint inside, QA randomly observed ABF certified welder Rory Hogan continuing to perform 4G (overhead position) Shielded Metal Arc Welding (SMAW) back welding cover pass on the CJP SPCM splice butt joint. The welder was utilizing 3.2mm diameter E7018H4R electrode implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1040C-CU. The joint being welded had a single V-groove butt joint with copper plate backing bar that was originally welded from the top using a combination of SMAW and Submerged Arc Welding (SAW) then removed the copper backing plate using carbon air arc gouging and ground smooth. The plates were preheated to more than 150 degree Fahrenheit using Miller Proheat 35 Induction Heating System prior welding. Welding parameters were monitored by ABF/QC William Sherwood. QA noted the working welding parameters of 130 amperes on the 3.2mm diameter E7018H4R electrode. The workmanship and appearance of the completed cover pass deemed satisfactory. During the shift, the welder was noted flush grinding the welded cover as he moves along the length of the butt joint being welded.

At OBG 3W-PP122.2 @ 8650 location Y=0mm to 2500mm top deck drop-in plate butt joint inside, QA randomly observed ABF certified welder Mike Jimenez continuing to perform 4G (overhead position) Shielded Metal Arc Welding (SMAW) back welding cover pass on the CJP SPCM splice butt joint. The welder was utilizing 3.2mm diameter E7018H4R electrode implementing Caltrans approved Welding Procedure Specification (WPS)

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ABF-WPS-D15-1040C-CU. The joint being welded had a single V-groove butt joint with copper plate backing bar that was originally welded from the top using a combination of SMAW and Submerged Arc Welding (SAW) then removed the copper backing plate using carbon air arc gouging and ground smooth. The plates were preheated to more than 150 degree Fahrenheit using Miller Proheat 35 Induction Heating System prior welding. Welding parameters were monitored by ABF/QC William Sherwood. QA noted the working welding parameters of 128 amperes on the 3.2mm diameter E7018H4R electrode. The workmanship and appearance of the completed cover pass deemed satisfactory. During the shift, cover pass back welding on area mentioned above was partially completed.

At OBG 3W-W2.5 @ 5030 location Y=0mm to 1850mm top deck drop-in plate butt joint inside, QA randomly observed ABF certified welder Han Wen Yu perform 4G (overhead position) Shielded Metal Arc Welding (SMAW) back welding cover pass on the CJP SPCM butt joint. The welder was utilizing 4.0mm diameter E7018H4R electrode implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1040C-CU. The joint being welded had a single V-groove butt joint with copper plate backing bar that was originally welded from the top using a combination of SMAW and Submerged Arc Welding (SAW) then removed the copper backing plate using carbon air arc gouging and ground smooth. The plates were preheated to more than 150 degree Fahrenheit using Miller Proheat 35 Induction Heating System prior welding. Welding parameters were monitored by ABF/QC William Sherwood. QA noted the working welding parameters of 150 amperes on the 4.0mm diameter E7018H4R electrode. The workmanship and appearance of the completed cover pass deemed satisfactory. During the shift, cover pass back welding on area mentioned above was completed.

At the request of Quality Control Field Supervisor, Bonifacio Daquinag, QA has randomly verified the QC VT/MT of the following various welded joints. The QA verification was performed to verify that the welding and the VT/MT inspection performed by the QC inspector meet the requirements of the contract documents. At the conclusion of the QA verification it appeared that the weld and the QC inspection complied with the contract documents.

1. 13E-PP124-E2.2 BF1 – floor beam flange splice butt weld joint QA verified.
2. 13E-PP124.5-E2.2 BF1 – floor beam flange splice butt weld joint QA verified.
3. 13E-PP122-E2.1 BF1 – floor beam flange splice butt weld joint QA verified.
4. 13E-PP122.2-LS1 – longitudinal stiffener splice butt weld joint QA verified.
5. 13E-PP122.2-LS2 – longitudinal stiffener splice butt weld joint QA verified.
6. 13E-PP122.2-LS3 – longitudinal stiffener splice butt weld joint QA verified.
7. Panel Point PP107E – top deck cat walk temporary attachment removal QA verified.
8. Panel Point PP108E – top deck cat walk temporary attachment removal QA verified.

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At OBG 13W-W2.5 @ 5030 top deck drop-in plate inside, ABF welder Wen Han Yu was observed performing 4G (overhead) position Shielded Metal Arc Welding (SMAW) back welding cover pass on butt joint.



At OBG 11E-PP107 and PP108 ES outside, ABF QC Salvador Merino was noted performing Magnetic Particle Testing (MT) on top deck catwalk temporary welded attachment.



Summary of Conversations:

No significant conversation occurred today.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact SMR Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

Inspected By: Lizardo, Joselito

Quality Assurance Inspector

Reviewed By: Levell, Bill

QA Reviewer